We may refer to figs. 1 and 2 for more ample details as to the scaling of the head.

Coloration.—The upper parts exhibit a fine golden-yellow tint; an elongated black spot covers the occiput; a black streak is continued upon the dorsal line from the region of the fore limbs as far as the anterior third of the tail; on both sides the back is covered, down to the flanks, with a large-meshed black network, having a very pretty effect; the upper surface of the limbs presents a similar pattern. The head and the temples are variegated with black; beneath each eye a great number of small black spots form an elongated spot, which is prolonged from the fourth to the last of the labials. A black line follows the lateral margin of the tail from the base. The lower parts are of a uniform white or whitish tint.

Dimensions.—Total length 112 millims.; head 17, trunk 13, tail 57.

Habitat.—Mossamedes. A single individual.

We have received from the same locality, through M. d'Anchieta, several rare and interesting reptiles, such as—

Sauria: *Chamæleo namaquensis* (Smith), *Homodactylus Bibroni, Euprepes Olivieri, E. Merremii, Mochlus afer, Anelytrops elegans.*

Ophidia: *Cerastes caudalis, Psammophis,* sp.?

Batrachia: *Dactylethra Mülleri, Bufo spinosus.*

Lisbon, July 9, 1867.

MISCELLANEOUS.

On the Development of the Ctenophora.

By A. Kowalewsky.

The author has carefully traced the development of the egg in various Ctenophora, and has arrived at some very curious results, especially with regard to the first phases of evolution.

In the *Eschscholtziæ* (and the other Ctenophora seem to be in the same case) two layers may be distinguished in the vitellus,—the external one very thin, formed of true protoplasm, the other central, consisting of an emulsion of large fatty drops. Acetic acid produces a granular precipitate in the former, but has no action on the second. The distinction of these two layers is important, as the former alone plays the part of a formative vitellus, the second behaving as a vitellus of nutrition.

The segmentation into two and then into four and eight parts is effected in such a manner that each of the spheres of segmentation presents the two layers, like the original vitellus. These spheres are *completely destitute of nuclei.* At this period a remarkable phenomenon takes place. In each of the eight spheres of segmentation

the external protoplasmic layer passes entirely to one side, forming a sort of cap upon each sphere. The division into sixteen then takes place, in such a way that the eight caps separate to form eight spheres of protoplasm, side by side with the eight spheres of fatty emulsion. From this moment the formative vitellus is completely separated from the eight large spheres of nutritive vitellus. In *Eschscholtzia cordata* the latter is never composed of more than sixteen spheres; the former alone continues to become rapidly segmented, and the nuclei suddenly make their appearance when the *small* spheres have reached the number of thirty-two. In other species the spheres of the nutritive vitellus continue to multiply by division for a certain time, but always more slowly than the formative vitellus.

The formative vitellus is now juxtaposed to the nutritive vitellus; but when its cells have become greatly multiplied, it gradually envelopes the latter. The egg then reacquires precisely the appearance which it had before the commencement of evolution. We may distinguish in it, in fact, a central mass in the form of an emulsion, the nutritive vitellus, and a peripheral layer, physically and chemically different. From this period, however, this layer is cellular; it is the blastoderm, or, if it be preferred, the external epithelium of the animal.

The mouth and intestinal canal soon make their appearance, in the form of a tubular invagination of the superficial epithelium. But, without following step by step the formation of each organ, we shall content ourselves with indicating two very remarkable histological circumstances relating to the formation of the otolithes and that of the tissue intermediate between the outer epithelium and the central mass.

The otolithes are formed in the embryonic nervous ganglion, which only presents from thirty to forty cells. Each of them (originally only one pair exists) appears as a little point in the interior of a cell by the side of the nucleus. When it has acquired a certain size, it slips out of the cell, this being the more easily effected because the latter has no enveloping membrane. The author appears to be inclined to believe that all the otolithes are successively produced by these two cells.

The formation of the intermediate tissue is very curious. It is effected by an actual secretion, with migration of cells. Between the external cellular layer and the central mass there accumulates a homogeneous, amorphous, and colourless substance. Stellate cells are soon seen to detach themselves from the external layer and penetrate into the interior of the homogeneous layer to constitute its cellular web. The migration of these cells takes place by means of their processes, which appear to act like the pseudopodia of the Rhizopoda.

M. Kowalewsky's memoir relates also to the development of *Cestum*, *Pleurobrachia*, *Cydippe*, and *Beroë*.—*Mém. Acad. Imp. de St. Pétersb.* tome x. 1866; *Bibl. Univ.* 1867, *Arch. Sci.* pp. 247–249.